DIVISION BY APPLES

Focus Lesson: Division by Apples

Materials: Modeling clay
Paper or plastic plates and knives
Blank paper
White board
2-3 apples for modeling
Apple Fractions by Jerry Pallotta
Apple juice or apple cider
cups

Time: 40-45 minutes

***Common Core Standards:**
CCSS.MATH.CONTENT.5.NF.B.7.C
Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?*

Thinking Skill: Division, Comparing, Combining, Representation

Objective:

Students will represent, compare, and combine different fractions using apple pieces.
Students will make different representations of the same fraction.
Students will combine fractions to describe parts of a whole.

Connection:

We've been discussing and exploring apples in our apple juice unit. When you eat an apple, how much of it do you eat? Can you eat it all? Do you cut it up into pieces? What is a "whole food"? When you cut an apple up you are splitting up the whole apple into fractions or pieces of the whole. An apple is an example of a whole food. There is only one ingredient in this apple: the apple! Apple juice, however, is made of more than one ingredient: apples, sugar, and water. Apples are a fraction, or a part, of the ingredients in apple juice. We use and see fractions everyday as well as in foods with many parts.

Explicit Instruction:

We will read *Apple Fractions* by Jerry Pallotta. After reading, I will hand out modeling clay to represent various fractions. We will use the examples in the book to explore fractions represented in the text. We will also investigate the ways we can put the pieces back together to make a whole.

Guided Practice:

Model the first two fractions in the book with real apple pieces. Discuss each fraction on board and have students write down each fraction on paper as they divide each section of clay to match the teacher's fraction.

Independent Practice:

Place students into groups with modeling clay. Hand out plastic knives. Project fractions from the book on the board (or just write them out), and have students cut their clay models with their plastic knives to model and discuss each fraction. Have students record each step.

Hand out cups and pour 1/4, then 1/3, then 1/2 of the cup with apple juice into teacher's cup and discuss what happens to fractions in cups.

Pour students a cup for an extra treat!

Reflection – Group Share:

Have students present their fractions to the class. Discuss and reflect on what they have learned from the activity and what they have discovered about fractions. Exit ticket: Where else do you use or see fractions in everyday life? What is an example of a whole food? What is an example of a food with many ingredients?

If they seem confused, remind them that they eat a fraction of pizza (one of eight pieces equals 1/8)

Reading list:

Apple Fractions by Jerry Pallotta

Teacher Note: